SIDLEY AUSTIN LLP
SIDLEY

SIDLEY AUSTIN LLP
1501 K STREET, N.W.
WASHINGTON, D.C. 20005
(202) 736 8000
(202) 736 8711 FAX

dlawson@sidley.com
(202) 736 8088

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July 8, 2013

By ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: *In the Matter of Promoting Interoperability in the 700 MHz Commercial Spectrum*, WT Docket No. 12-69

Dear Ms. Dortch:

On Wednesday, July 3, 2013, Gary Phillips, Joan Marsh and Michael Goggin of AT&T Services, Inc. and the undersigned met with Sean Lev and David Horowitz of the Office of General Counsel and Charles Mathias of the Wireless Telecommunications Bureau. During the meeting, we explained that a lower 700 MHz Band 12 mandate would cause significant harms, would produce no public interest benefits, and would be patently unlawful.

The advocates of regulation are proposing a requirement that AT&T include in its handsets Band 12 components that AT&T does not want, that it would not use, and that would degrade the service it provides to its customers. Each of the ways that AT&T could, in theory, implement such a requirement would harm consumers and retard competition.

First, AT&T could, in theory, support Band 12 in its network and offer only Band 12 devices (rather than the Band 17 devices it offers today), thereby exposing its network and customers to harmful Channel 51 and E Block interference that would reduce throughput and cause dropped connections. As we emphasized, that option is a non-starter. AT&T paid a premium at auction to acquire spectrum that is not adjacent to those interfering sources so that it could offer its customers LTE service of the highest quality. In any event, AT&T could not, in practice, convert to a Band 12 only network, because AT&T already has tens of millions of Band 17 devices on its network, and switching its base stations from broadcasting in Band 17 to Band

12 would render all of those Band 17 devices useless. Rather, any switch to Band 12 could occur only after equipment manufacturers have developed and released the capability that will permit base stations to broadcast in *both* Band 12 and Band 17 simultaneously, and after that new feature is tested and deployed throughout the network. That is unlikely to be possible before 2015, and even then the switch to Band 12-only devices would not be practical until the Commission has fully resolved the Channel 51 and E block interference problems.

Second, AT&T could instead purchase devices that support both Band 12 and Band 17 and continue to have its base stations broadcast in Band 17. Each of the two ways to implement that "dual-band" approach would cause significant harm. Under the first alternative, AT&T would waste one of the available sub-1 GHz ports in devices by devoting it to Band 12 components that would never be used. Handset ports – particularly low-band handset ports – are a scarce resource. State-of-the-art devices today have only three low-band ports, and AT&T needs all three just to use the low-band LTE spectrum it currently holds (Band 17, Band 5, and Band 29). Even if chipset technology improves to offer more ports in the future, AT&T's need for ports is expanding as well (*e.g.*, 600 MHz and international roaming bands), and if AT&T wastes a port on a band it does not need and will never use, it will be impaired in its ability to compete effectively with other LTE providers. This option, too, is thus a non-starter.

AT&T could alternatively rely on devices that include special internal switches that would permit Band 12 and 17 components to share a single port. No provider does that today, and for good reason: as Qualcomm has explained, that approach would "degrade performance of the device."[1] The switch would cause insertion loss, which means that the uplink signal the handset sends to cell towers would be weaker, and that would result in reduced coverage and lower average throughput (particularly at or near the cell edge). In addition, such switches are always on and drawing battery power (and to compensate for the weakened signal, the handset would also, where possible, attempt to increase power, draining the battery even more). And the additional components needed to implement this approach would take up space, triggering form factor compromises that Verizon, Sprint and T-Mobile, among others, would not face.

Equally important, either of the dual-band approaches would require a redesign of all of AT&T's devices that could easily reduce customer choice in devices. AT&T has been working for five years to develop the portfolio of Band 17 devices it offers today and has in the pipeline; indeed, AT&T has already submitted to manufacturers the specifications for devices that it will introduce in 2015. Those devices include not only millions of handsets, but also tablets, modems, cards in machines of all types and other connected devices, some of which, for form factor, cost or other reasons, may be unable even to accommodate dual-banding. To supply AT&T with devices that support both Band 12 and Band 17, manufacturers would have to

[1] Comments of Qualcomm Inc., WT Docket No. 12-69, at 60 (June 1, 2012).

redesign the circuit boards from scratch – adding components, moving components around, and, given space limitations, potentially leaving out desired components and functionalities, and then testing each new design. The Commission has not developed any record on how many devices could reasonably be available if all of AT&T's device makers had to start over and design devices that (needlessly) incorporated Band 12. And it must be emphasized that such a dual-banding design process is vastly more complex than what manufacturers do today when an A Block provider wants a Band 12 variant of an existing Band 13 or Band 17 device. As the regulation proponents have consistently acknowledged, the manufacturer can simply switch out the filters and the duplexers within the existing design (since those components are pin-compatible) at little or no incremental cost.

On the other side of the scale, the claimed benefits of the proposed regulation are illusory. The Band 12 mandate will not create any new or more potent LTE competitors. Most of the A Block spectrum is held by Verizon, T-Mobile, and Leap. Each of those providers has already deployed LTE in other bands. Moreover, T-Mobile and Leap have both made clear that exclusion zones make their A Block licenses (in Boston and Chicago, respectively) unbuildable until the Channel 51 problem is solved.[2]

Most of the rest of the A Block spectrum is held by investment companies (*e.g.*, Vulcan, Triad, Continuum, 1-700, and McBride) that do not have any networks or customers, companies that have exited the wireless business (*e.g.*, Cox), and companies that have taken no steps whatsoever to enter the wireless business. Underscoring their lack of interest in deploying LTE networks, almost all of these A Block holders also originally acquired Lower 700 MHz B and C Block spectrum that they could have used to deploy networks interoperable with AT&T's network, but instead chose to sell that spectrum in the secondary market.

That leaves principally U.S. Cellular and C-Spire. U.S. Cellular has already deployed a Band 12 LTE network, and expects to have LTE available to almost 90 percent of its customers this year.[3] Moreover, U.S. Cellular already offers eleven different Band 12 LTE smartphones

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[2] *See, e.g.*, MetroPCS (now T-Mobile) Submission, Exhibit 1, Form 601, WT Docket No. 12-332, at 4 (Nov. 13, 2012) ("[w]ith specific reference to the MetroPCS [A Block] License in [Boston], th[e] [Channel 51] exclusion zone effectively creates insurmountable barriers to deployment"); Request of Cricket License Company, LLC for Extension of Time, WT Docket No. 12-332, at 4 (June 3, 2013) (explaining that in Chicago the Channel 51 "exclusion zone significantly limits the areas . . . in which Cricket can construct LTE base stations and provide service to customers").

[3] Press Release, U.S. Cellular, U.S. Cellular Reports First Quarter 2013 Results, (May 3, 2013) ("We believe there will be strong, ongoing demand for smartphones and data products and services from our customers, and we have significant room for growth in this area. We're

from five manufacturers – more different LTE smartphone models than T-Mobile – and U.S. Cellular has announced that it has more LTE devices to come throughout the year.[4] C-Spire has likewise already deployed an LTE network (in Band 4).[5] And, contrary to the claims by some commenters, both companies have struck deals with Apple to distribute the iPhone.[6]

Moreover, the proposed regulation would *not* create devices that are truly interoperable across networks – *i.e.*, that an AT&T customer could use if he or she switched to a Band 12 A Block provider – because AT&T's devices are backward-compatible with GSM, and the A Block providers that operate wireless networks use devices that are backward-compatible with CDMA. Nor would the proposed regulation create economies of scale in purchasing for small carriers, because those providers would still be purchasing in the same small quantities relative to what AT&T and Verizon purchase, and they would still not be purchasing the same handsets that AT&T purchases (but would instead have to convince manufacturers to produce dual-banded (12/17) devices that are backward-compatible with CDMA).

In short, the public interest harms from a Band 12 mandate greatly outweigh the purely speculative benefits. AT&T and its tens of millions of LTE customers would experience significant harms from such a mandate; the purported benefits of a mandate are, at best, negligible. Moreover, the foundation of the proposed Band 12 mandate – that such regulation is needed to give a leg up to certain competitors – violates the fundamental principle that "the

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supporting this growth by bringing 4G LTE to 87 percent of our customers in 2013, and increasing our network capacity. In our core markets, 4G LTE smartphones were 76 percent of smartphones sold in the quarter, while smartphones overall were 62 percent of devices sold. We recently launched the 4G LTE Samsung Galaxy S® 4, and we have more devices to come throughout the year."), http://phx.corporate-ir.net/phoenix.zhtml?c=106793&p=irol-IRHome.

[4] *Id.* *Compare* U.S. Cellular, *Devices*, http://www.uscellular.com/uscellular/cell-phones/showPhones.jsp?device-category=device-category-smartphone&features=device-feature-4glte *with* T-Mobile, *Smartphones and Cell Phones*, http://www.t-mobile.com/shop/phones/default.aspx?shape=smartphones.

[5] Union Telephone, which operates in Colorado, Wyoming and parts of Utah has a single A Block license in Caspar, Wyoming (where it also has the C Block) and holds a broad portfolio of B and C block spectrum that it could deploy today on an LTE network that would be interoperable with AT&T's LTE network.

[6] Peter Svensson, *US Cellular embraces iPhone after rejecting it*, Associated Press, May 3, 2013, *available at* http://news.yahoo.com/us-cellular-embraces-iphone-rejecting-191457456.html; C Spire Wireless, *Shop All Phones*, http://www.cspire.com/shop_and_learn/devices/category_phones_list.jsp?id=cat30003.

Communications Act requires [the Commission] to focus on competition that benefits the public interest, not on equalizing competition among competitors."[7]

But the Commission would lack authority to promulgate the proposed regulation even if it were not so decidedly contrary to the public interest. As the D.C. Circuit recently reaffirmed, the Commission does not have a general, roving authority to regulate wireless services in the "public interest."[8] To the contrary, the Commission "may not rely on Title III's public-interest provisions without mooring its action to a distinct grant of authority in that Title."[9] There is no explicit grant of authority in the Communications Act that would permit the Commission to force AT&T to include a band in its devices that it does not need and will not use.

There are three provisions in Title III that address mobile wireless devices – 47 U.S.C. §§ 302a, 303(e) and 303(f). By their plain terms, however, those sections permit the Commission to regulate devices only to ensure purity of signal and to prevent interference. The proposed Band 12 mandate is unrelated to either of those purposes. Indeed, if anything, it would degrade signal quality for AT&T's customers and make their devices *more* susceptible to interference.[10]

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[7] Memorandum Opinion and Order on Reconsideration, *Applications of Craig O. McCaw, Transferor, and American Tel. & Telegraph Co., Transferee*, 10 FCC Rcd. 11786, ¶ 9 (1994); *accord SBC Commc'ns Inc.* v. *FCC*, 56 F.3d 1484 (D.C. Cir. 1995) ("[t]he Commission is not at liberty . . . to subordinate the public interest to the interest of equalizing competition among competitors") (internal quotation marks omitted); *Hawaiian Tel. Co.* v. *FCC*, 498 F.2d 771, 776 (D.C. Cir. 1974); Order, *Application of Motorola, Inc. for Consent to Assign 800 MHz Licenses to Nextel Commc'ns, Inc.*, 10 FCC Rcd. 7783, ¶ 20 n.58 (public interest requires promoting competition, not "equalizing competition among competitors").

[8] *Cellco P'ship* v. *FCC*, 700 F.3d 534, 542 (D.C. Cir. 2012); *see also Motion Picture Ass'n of Am., Inc.* v. *FCC*, 309 F.3d 796, 806 (D.C. Cir. 2002) ("the FCC cannot act in the 'public interest' if the agency does not otherwise have the authority to promulgate the regulations at issue").

[9] *Id.*

[10] When Congress wanted to give the Commission broader authority to dictate the channels or bands that wireless apparatus must include, it knew how to do so. For example, in 47 U.S.C. § 303(s), Congress gave the Commission express authority to "require that apparatus designed to receive television pictures broadcast simultaneously with sound be capable of adequately receiving all frequencies allocated by the Commission to television broadcasting when such apparatus is shipped in interstate commerce, or is imported from any foreign country into the United States, for sale or resale to the public."

Nor do either of the Title III grants of authority that the Commission relied upon in its *Data Roaming Order*[11] and seeks to rely upon in defense of its *Net Neutrality Order*[12] – 47 U.S.C. §§ 303(b) and 316 – provide authority for a Band 12 mandate.[13] Section 303(b), which permits the Commission to "prescribe the nature of the service to be rendered by each class of licensed stations," plainly does not apply, because a Band 12 mandate would not prescribe the nature of any "service" at all. The proposed regulation would dictate only the design of wireless apparatus; it would not dictate any terms of service and would not change in any way the services that AT&T or anyone else would be allowed to provide. Rather, the sole effect of the mandate would be to require AT&T to include components in its devices that would not be used to provide any service. In that regard, the D.C. Circuit has made clear that the Commission's authority over "radio communications," which include the mobile services AT&T provides,[14] extends only to the components in a device that will be used for transmission and only while they are used in transmission.[15] The Band 12 technology at issue here would not – indeed, could not – be used by AT&T for transmission until after the interference problems plaguing the A Block are resolved (and the technology that will allow base stations to broadcast in Bands 12 and 17 simultaneously has been commercialized, tested and deployed throughout the network).

Indeed, if the Commission were to attempt to interpret the "nature" of service to encompass prescribing how a licensee designs the handsets it chooses to distribute, such an interpretation would convert Section 303(b) into precisely the unbounded authority over licensee business practices that the courts have repeatedly emphasized that the Commission does not have. In this regard, the Supreme Court has held that the Communications Act "does not essay to regulate the business of the licensee," and the Commission has no "supervisory control" over the licensee's "business management or . . . policy."[16] The Commission's authority to

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[11] Second Report and Order, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, 26 FCC Rcd. 5411 (rel. Apr. 7, 2011) ("*Data Roaming Order*").

[12] Report and Order, *Preserving the Open Internet*, 25 FCC Rcd. 17905 (rel. Dec. 23, 2010) ("*Net Neutrality Order*").

[13] *Cellco P'ship*, 700 F.3d at 540, 542.

[14] *See* 47 U.S.C. § 153(27).

[15] *Am. Library Ass'n* v. *FCC,* 406 F.3d 689, 700 (D.C. Cir. 2005) ("the agency's general jurisdictional grant does not encompass the regulation of consumer electronics products that can be used for receipt of wire or radio communication when those devices are not engaged in the process of radio or wire transmission.")

[16] *FCC* v. *Sanders Bros. Radio Station*, 309 U.S. 470, 475 (1940); *see also Cellco P'ship*, 700 F.3d at 543 (acknowledging the holding in *Sanders*).

"prescribe" the "nature" of the service to be rendered in each class of station therefore cannot reasonably be read to extend beyond regulation of the *type of service* the licensee may provide, so that spectrum as a whole may be allocated efficiently. This was the basis on which the D.C. Circuit upheld the *Data Roaming Order*: under that rule, if a licensee chooses to provide mobile data services, it must also (under certain conditions) offer a data roaming service.[17] By its plain terms and controlling precedent, Section 303(b) provides no legal authority for the proposed regulation.

No more availing is Section 316, which establishes procedures that the Commission must follow when its exercise of its delegated authority has the effect of modifying licenses. But that section is not an independent grant of substantive regulatory authority that authorizes any regulation of handsets that the Commission may determine would serve the "public interest." That is why the D.C. Circuit treated section 316, like the Commission's section 303(r) "housekeeping" authority, as merely supplemental to the substantive regulatory authority provided by section 303(b).[18] Any broader reading of section 316 is untenable. For example, the Commission clearly is constrained to act within its express grants of authority when awarding licenses in the first instance, but under the regulation proponents' expansive reading of Section 316, on the second day of the license term, the Commission could impose all sorts of additional conditions and restrictions that it lacked authority to impose when it issued the license, as long as it labeled them license "modifications" and made findings that the new regulation was in the "public interest." Such a reading of Section 316 would convert that provision into precisely the unbounded "public interest" authority that the courts have emphasized that the Commission does not have.[19] In reality, the Commission's authority under Section 316 is *narrower* than it is elsewhere, because even if the Commission could have imposed a license term in the first instance, it cannot do so as a modification if: (1) the modification would work a fundamental change in the license[20] or (2) if the change is not in the public interest. And for all of the reasons

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[17] *Cellco P'ship*, 700 F.3d at 542-43 ("That is exactly what the data roaming rule does – it lays down a rule about 'the nature of the service to be rendered' by entities licensed to provide mobile-data service").

[18] *Id.* at 543.

[19] *E.g.*, *Sanders Bros.*, 309 U.S. at 475; *see also Cellco P'ship*, 700 F.3d at 542-43.

[20] "Modif[ication]" means to change carriers' obligations "moderately or in minor fashion," *MCI Telecomms. Corp.* v. *AT&T Co.*, 512 U.S. 218, 225 (1994), and the Commission's modification authority under Section 316 does not include the power to "fundamental[ly] change" the nature of the service that a licensee is authorized to provide. *Cmty. Television, Inc.* v. *FCC*, 216 F.3d 1133, 1141 (D.C. Cir. 2000). *See Cellco P'ship*, 700 F.3d at 543-44 (reaffirming fundamental changes are impermissible but finding data roaming rules an acceptable modification).

summarized above, even if Section 316 had any relevance here, a Band 12 mandate that materially degrades the service AT&T provides over its licenses for speculative and illusory benefits would be both a fundamental license change and contrary to the public interest.

Further, the courts have made clear that Sections 1, 4(i), 301, and 303(r) are merely housekeeping provisions and do not constitute independent grants of authority. *See*, *e.g.*, *Comcast Corp.* v. *FCC*, 600 F.3d 642, 652-54 (D.C. Cir. 2010); *MPAA* v. *FCC*, 309 F.3d 796, 806 (D.C. Cir. 2002).

In short, an interoperability mandate would take the extraordinary step of ordering AT&T to include technology in its handsets that it cannot use and that would harm its customers and reduce competition, and it would do so in pursuit of purported benefits that are illusory and grounded in the mission of helping individual licensees, rather than protecting competition. It would be arbitrary and capricious in the extreme and in all events well beyond the Commission's statutory authority.

Very truly yours,

David L. Lawson
David L. Lawson

cc: Sean Lev
David Horowitz
Charles Mathias